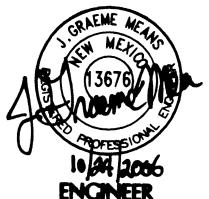


ARCHITECT



ALBUQUERQUE, NEW MEXICO
CHERRY / SEE / REAMES ARCHITECTS, LLP

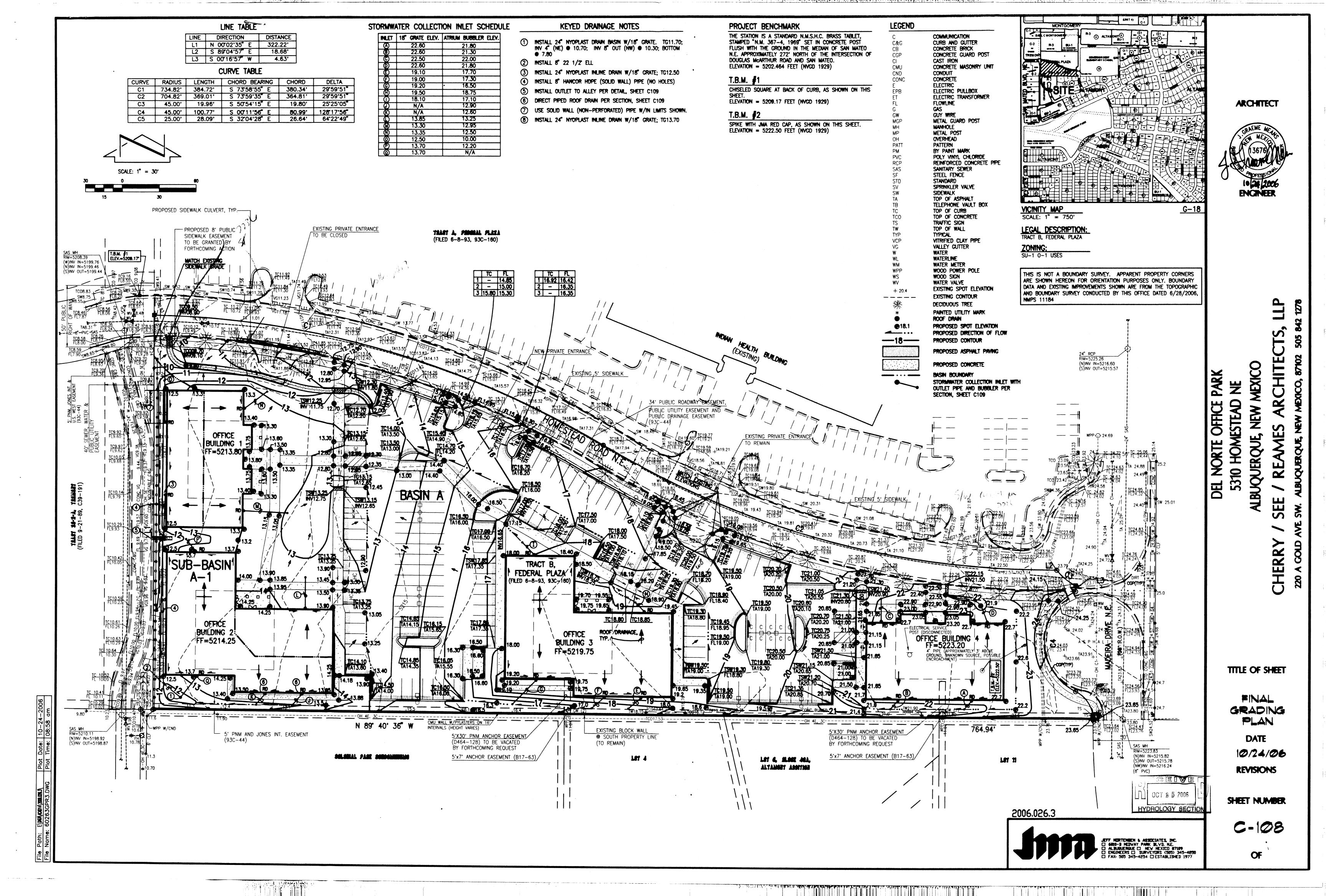
TITLE OF SHEET
PAVING
SECTIONS
AND DETAILS

DATE
10/24/06
REVISIONS

SHEET NUMBER

C107

OF



### I. EXECUTIVE SUMMARY AND INTRODUCTION

THE PROPOSED DEL NORTE OFFICE PARK IS LOCATED IN THE NEAR NORTHEAST HEIGHTS AREA OF ALBUQUERQUE. SITE DEVELOPMENT PLAN FOR BUILDING PERMIT APPROVAL HAS BEEN PROCESSED THROUGH EPC, AND A CONCEPTUAL GRADING PLAN WAS APPROVED ALONG WITH THE FOLLOW-UP DRB SITE PLAN REVIEW. AS DEMONSTRATED BY THE CONCEPTUAL AND ROUGH GRADING PLANS, THIS INFILL SITE WILL CONTINUE DISCHARGE FREELY TO DOWNSTREAM PUBLIC STREET RIGHT OF WAY. NO PUBLIC INFRASTRUCTURE WILL BE REQUIRED. OFFSITE FLOWS DO NOT IMPACT THE SITE. THE PURPOSE OF THIS DRAINAGE PLAN IS TO OBTAIN BUILDING AND SO #19 PERMIT APPROVALS.

### II. PROJECT DESCRIPTION:

AS SHOWN BY VICINITY MAP G-18 LOCATED HEREON, THE SITE IS LOCATED ON THE SOUTH SIDE OF HOMESTEAD ROAD NE, JUST EAST OF SAN MATEO BLVD NE. THE SURROUNDING AREA IS FULLY DEVELOPED, MAKING THIS AN INFILL DEVELOPMENT. THE EXISTING LEGAL DESCRIPTION IS TRACT B, FEDERAL PLAZA. THE SITE IS ZONED SU-1 FOR 0-1 USES AND THE PROPOSED OFFICE DEVELOPMENT IS CONSISTENT WITH THE ZONING.

AS SHOWN BY PANEL 139 OF 825 OF THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAPS. BERNALILLO COUNTY, NEW MEXICO, AND INCORPORATED AREAS, THE SITE DOES NOT LIE WITHIN OR IMMEDIATELY UPSTREAM OF A DESIGNATED FLOOD HAZARD ZONE.

### III. BACKGROUND DOCUMENTS

THE FOLLOWING IS A LIST OF DOCUMENTS RELATED TO THE SITE AND SURROUNDING AREA. THIS LIST MAY NOT BE INCLUSIVE. HOWEVER, REPRESENTS A SUMMARY OF RELEVANT PLANS AND DOCUMENTS THAT ARE KNOWN TO THE ENGINEER AT THE TIME OF PLAN PREPARATION.

- A. GRADING AND DRAINAGE PLAN FOR BRIGHT BEGINNINGS SAN MATEO BY JMA DATED 06-14-89 (G-18/D32). THIS PLAN SUPPORTED CONSTRUCTION OF THE DAY CARE FACILITY THAT LIES TO THE WEST OF THE PROPOSED DEL NORTE OFFICE PARK SITE. IN CONJUNCTION WITH THE DAY CARE PROJECT, A PUBLIC ALLEY BETWEEN THE DAY CARE AND THE PROPOSED OFFICE PARK WAS IMPROVED WITH MOUNTABLE CURB AND GUTTER AND ALLEY GUTTER (CPN 3774, 05/12/89, ALSO BY JMA). AS DEMONSTRATED BY THE DRAINAGE PLAN FOR THE BRIGHT BEGINNINGS, THE PUBLIC ALLEY HAS A CAPACITY OF 26.4 CFS AND WAS RECEIVING AN OFFSITE 100-YEAR PEAK FLOW OF 15 CFS FROM THE UNDEVELOPED FUTURE OFFICE SITE TO THE EAST.
- B. GRADING PLAN FOR HOMESTEAD OFFICE PARK PREPARED BY CHAVEZ-GRIEVES ENGINEERS DATED 5/17/1993. THIS PLAN SHOWED A TWO-PHASE OFFICE PARK DEVELOPMENT WITH PHASE 1 ON THE NORTH SIDE OF HOMESTEAD AND PHASE 2 ON THE SOUTH SIDE OF HOMESTEAD ON THE SAME TRACT THAT IS NOW PROPOSED AS THE DEL NORTE OFFICE PARK. PHASE 1 WAS CONSTRUCTED, PHASE 2 WAS NOT. THE PLAN IDENTIFIED FREE DISCHARGE TO HOMESTEAD FOR AN OFFICE PARK DEVELOPMENT. THE PROPOSED DEL NORTE OFFICE PARK IS CONSISTENT WITH THIS PLAN.
- C. CONCEPTUAL AND ROUGH GRADING PLANS FOR DEL NORTE OFFICE PARK DATED 08/11/2006 AND 10/05/06 BY JMA (G-18/D4). THESE PREVIOUSLY APPROVED PLANS FOR THIS SITE JUSTIFIED FREE DISCHARGE TO HOMESTEAD IN A MANNER CONSISTENT WITH THE PREVIOUSLY APPROVED PLANS FOR THE SITE.

THE PROPOSED CONSTRUCTION OF AN OFFICE PARK DEVELOPMENT DRAINING DIRECTLY AND FREELY TO THE FRONTING PUBLIC STREET AS PROPOSED AND DESCRIBED HEREIN IS IN ACCORDANCE WITH THE POLICIES AND REQUIREMENTS OF THE ABOVE LISTED

### IV. EXISTING CONDITIONS:

THE SITE IS UNDEVELOPED. EVIDENCE OF PRIOR GROUND DISTURBANCE IS EVIDENT, AND THE GROUND COVER OF NATIVE VEGETATION IS SPARSE. THE SITE REPORTEDLY WAS USED AS A MOBILE HOME PARK. THERE IS SOME EVIDENCE OF ABANDONED UTILITIES ON THE SITE. THE SITE SHEET DRAINS FROM SOUTHEAST TO NORTHWEST TO HOMESTEAD WHICH IS A PRIVATELY MAINTAINED STREET WITHIN A PUBLIC ACCESS EASEMENT. OFFSITE FLOWS DO NOT ENTER THE SITE FROM THE DEVELOPED STREETS TO THE NORTH AND EAST, FROM THE DEVELOPED PUBLIC ALLEY TO THE WEST, OR FROM THE DEVELOPED RESIDENTIAL PROPERTIES TO THE SOUTH. A CONCRETE BLOCK WALL RUNS ALONG THE SOUTH PROPERTY LINE, AND AN OPEN WROUGHT IRON FENCE RUNS ALONG THE WEST PROPERTY LINE.

### V. DEVELOPED CONDITIONS

### THIS PLAN SUPPORTS BUILDING PERMIT APPROVALS.

THE IMPROVEMENTS WILL CONSIST OF THE CONSTRUCTION OF A FOUR BUILDING OFFICE PARK WITH PAVED PARKING, UTILITY AND LANDSCAPING IMPROVEMENTS. DEVELOPED ONSITE DRAINAGE WILL BE DIRECTED TO THE EXISTING PUBLIC STREET AND ALLEY VIA OVERLAND FLOW CONVEYED BY THE PAVED PARKING IMPROVEMENTS. MOST OF THE RUNOFF WILL DRAIN TO HOMESTEAD. WITH A SMALL PORTION (ABOUT 11.5 % OF THE SITE GENERATING LESS THAN 2 CFS DURING THE 100-YEAR STORM) DRAINING TO THE WEST TO THE ALLEY. THIS IS MUCH LESS THAN THE CAPACITY OF 26.4 CFS AND THE EXISTING 100-YEAR FLOW RATE OF 15 CFS INDICATED BY REFERENCE B.

AS REQUIRED BY AN EPC CONDITION, RAIN WATER MUST BE CAPTURED FORM THE ROOF DRAINS FOR RE-USE IN LANDSCAPED areas. To comply with this plan, all roof drains will discharge to large diameter pvc drain basins that have a DEEP SUMP THAT WILL RETAIN WATER, AND WILL HAVE OVERFLOW OUTFALL PIPES DISCHARGING TO SMALL BUBBLER INLETS IN LANDSCAPING AREAS.

### VI. GRADING PLAN

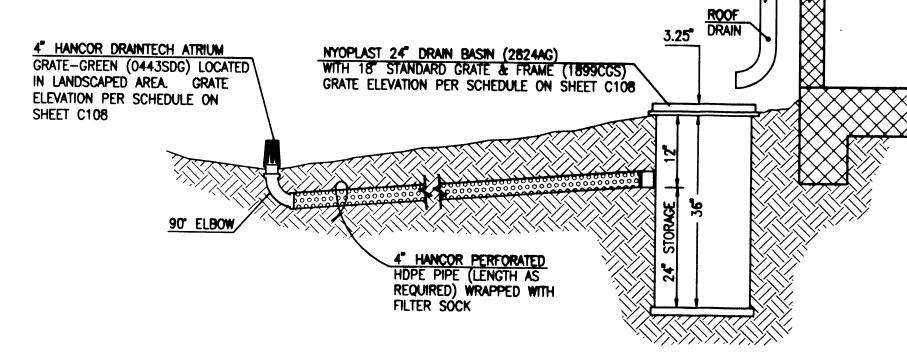
THE GRADING PLAN ON SHEET C109 OF THIS SUBMITTAL SHOWS: 1) EXISTING GRADES INDICATED BY SPOT ELEVATION AND CONTOURS AT 1' 0" INTERVALS FROM THE TOPOGRAPHIC SURVEY BY THIS OFFICE DATED JUNE 28, 2006, NMPS 11184 2) PROPOSED GRADES INDICATED BY FINISHED PAD ELEVATIONS, SPOT ELEVATIONS, AND CONTOURS AT 1' 0" INTERVALS, 3) THE LIMIT AND CHARACTER OF THE EXISTING IMPROVEMENTS, 4) THE LIMIT AND CHARACTER OF THE PROPOSED IMPROVEMENTS, AND 4) CONTINUITY BETWEEN PROPOSED AND EXISTING GRADES.

### VII. CALCULATIONS

THE CALCULATIONS, WHICH APPEAR HEREON, ANALYZE BOTH THE EXISTING AND FULLY DEVELOPED CONDITIONS FOR THE 100-YEAR, 6-HOUR RAINFALL EVENT. THE PROCEDURE FOR 40-ACRE AND SMALLER BASINS, AS SET FORTH IN THE REVISION OF SECTION 22.2, HYDROLOGY OF THE DEVELOPMENT PROCESS MANUAL, VOLUME 2, DESIGN CRITERIA, DATED JANUARY, 1993, HAS BEEN USED TO QUANTIFY THE PEAK RATE OF DISCHARGE AND VOLUME OF RUNOFF GENERATED. BECAUSE THE EXISTING SITE WAS GRADED AND COMPACTED (TREATMENT C), THE PROPOSED ROUGH GRADING WILL NOT RESULT IN AN INCREASE, HOWEVER, THE EVENTUAL SITE CONSTRUCTION WITH IMPERVIOUS PARKING AREAS AND BUILDINGS WILL RESULT IN AN INCREASE IN RUNOFF THAT HAS BEEN PREVIOUSLY JUSTIFIED.

### VIII. CONCLUSIONS

1) THE PROPOSED SITE IMPROVEMENTS AND DRAINAGE CONCEPT ARE CONSISTENT WITH THE DEVELOPMENT CRITERIA ESTABLISHED BY PREVIOUSLY APPROVED PLANS FOR THE SITE. 2) DEVELOPED RUNOFF FROM THIS SITE WILL DRAIN FREELY TO PUBLIC DOWNSTREAM PAVING AND STORM DRAINAGE IMPROVEMENTS. 3) THERE ARE NO DPM DESIGN VARIANCES, DRAINAGE EASEMENTS OR DRAINAGE COVENANTS ANTICIPATED AT THIS TIME.



NOTE: CONTACT LAWRENCE LOPEZ, HANCOR INC. ● 385-9584 FOR PRODUCT ORDERING

STORMWATER COLLECTION INLET

ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED UNDER CONTRACT SHALL, EXCEPT AS OTHERWISE STATED OR PROVIDED FOR HEREON. BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION - 1986, UPDATE 7, INCLUDING AMENDMENT 1

**GRADING NOTES** 

2. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL

SYSTEM, 260-1990 FOR LOCATION OF EXISTING UTILITIES.

- 3. IF ANY UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES ARE SHOWN ON THESE DRAWINGS, THEY ARE SHOWN IN AN APPROXIMATE MANNER ONLY, AND SUCH LINES MAY EXIST WHERE NONE ARE SHOWN. IF ANY SUCH EXISTING LINES ARE SHOWN, THE LOCATION IS BASED UPON INFORMATION PROVIDED BY THE OWNER OF SAID UTILITY. AND THE INFORMATION MAY BE INCOMPLETE. OR MAY BE OBSOLETE BY THE TIME CONSTRUCTION COMMENCES. THE ENGINEER HAS CONDUCTED ONLY PRELIMINARY INVESTIGATION OF THE LOCATION, DEPTH, SIZE, OR TYPE OF EXISTING UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES. THIS INVESTIGATION IS NOT CONCLUSIVE, AND MAY NOT BE COMPLETE, THEREFORE, MAKES NO REPRESENTATION PERTAINING THERETO, AND ASSUMES NO RESPONSIBILITY OR LIABILITY THEREFORE. THE CONTRACTOR SHALL INFORM ITSELF OF THE LOCATION OF ANY UTILITY LINE, PIPELINE, OR UNDERGROUND UTILITY LINE IN OR NEAR THE AREA OF THE WORK IN ADVANCE OF AND DURING EXCAVATION WORK. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGE CAUSED BY ITS FAILURE TO LOCATE, IDENTIFY AND PRESERVE ANY AND ALL EXISTING UTILITIES, PIPELINES, AND UNDERGROUND UTILITY LINES. IN PLANNING AND CONDUCTING EXCAVATION. THE CONTRACTOR SHALL COMPLY WITH STATE STATUTES, MUNICIPAL AND LOCAL ORDINANCES. RULES AND REGULATIONS, IF ANY, PERTAINING TO THE LOCATION OF THESE LINES AND FACILITIES.
- 4. SHOULD A CONFLICT EXIST BETWEEN THESE PLANS AND ACTUAL FIELD CONDITIONS, THE CONTRACTOR SHALL PROMPTLY NOTIFY THE ENGINEER IN WRITING SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM. AMOUNT OF DELAY FOR ALL PARTIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL INTERPRETATIONS IT MAKES WITHOUT FIRST CONTACTING THE ENGINEER AS REQUIRED ABOVE.
- 5. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ADJACENT PROPERTIES DURING CONSTRUCTION.
- 6. ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING SAFETY AND HEALTH.
- 7. THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES FROM THE SITE INTO PUBLIC RIGHT-OF-WAY OR ONTO
- 8. THE CONTRACTOR SHALL PROMPTLY CLEAN UP ANY MATERIAL EXCAVATED WITHIN THE PUBLIC RIGHT-OF-WAY SO THAT THE EXCAVATED MATERIAL IS NOT SUSCEPTIBLE TO BEING WASHED DOWN THE STREET.
- 9. WHEN APPLICABLE, THE CONTRACTOR SHALL SECURE "TOPSOIL DISTURBANCE PERMIT" PRIOR TO BEGINNING CONSTRUCTION. AN EXCAVATION PERMIT IS REQUIRED FOR ALL WORK WITHIN PUBLIC RIGHT-OF-WAY.
- 10. A DISPOSAL SITE FOR ALL EXCESS EXCAVATION MATERIAL (CONTAMINATED OR OTHERWISE), ASPHALTIC PAVING, CONCRETE PAVING, ETC. SHALL BE OBTAINED BY THE CONTRACTOR IN COMPLIANCE WITH APPLICABLE REGULATIONS. ALL COSTS INCURRED IN OBTAINING A DISPOSAL SITE AND IN HAUL THERETO SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION, THEREFORE, NO SEPARATE PAYMENT SHALL BE MADE.
- 11. A BORROW SITE FOR IMPORT MATERIAL SHALL BE OBTAINED BY THE CONTRACTOR IN COMPLIANCE WITH APPLICABLE REGULATIONS. ALL COSTS INCURRED IN OBTAINING A BORROW SITE AND IN HAUL THERETO SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION, THEREFORE, NO SEPARATE PAYMENT SHALL BE MADE.
- 12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SAFELY OBTAINING THE REQUIRED COMPACTION. THE CONTRACTOR SHALL SELECT AND USE METHODS WHICH SHALL NOT BE INJURIOUS OR DAMAGING TO THE EXISTING FACILITIES AND STRUCTURES WHICH SURROUND THE WORK AREAS.
- 13. THE CONTRACTOR SHALL CONFINE HIS WORK WITHIN THE CONSTRUCTION LIMITS IN ORDER TO PRESERVE THE EXISTING IMPROVEMENTS AND SO AS NOT TO INTERFERE WITH THE OPERATIONS OF THE EXISTING FACILITIES.
- 14. ALL DIMENSIONS AND RADII OF CURB, CURB RETURNS, AND WALLS ARE SHOWN TO THE FACE OF CURB AND/OR
- 15. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL POTENTIAL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
- 16. ALL FILL SHALL BE FREE FROM VEGETATION, DEBRIS, AND OTHER DELETERIOUS MATERIALS AND SHALL HAVE A MINIMUM R VALUE OF 50.
- 17. ALL FILL SHALL BE COMPACTED TO A MINIMUM OF 95% ASTM D-1557 UNLESS A GREATER COMPACTION REQUIREMENT IS OTHERWISE SPECIFIED. ALL EARTHWORK FOR BUILDING PADS SHALL BE PERFORMED IN ACCORDANCE WITH THE STRUCTURAL AND GEOTECHNICAL SPECIFICATIONS.
- 18. ALL EXISTING UTILITIES ENCOUNTERED WITHIN THE WORK LIMITS SHALL BE ADJUSTED TO GRADE AND SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION.
- 19. THE PAD ELEVATIONS SHOWN HEREON ARE FOR ROUGH GRADING PURPOSES.

MOUNTABLE CURB AND GUTTER

SAWCUT, REMOVE AND DISPOSE OF

5" CURB TO 4" CURB OVER 2"

DISTANCE

MOUNTABLE CURB. EXTEND RUNDOWN

TO FLOWLINE AND TRANSITION FROM

EXISTING ALLEY GUTTER

- 20. MAXIMUM UNPROTECTED SLOPES SHALL BE 3:1; MINIMUM SLOPES SHALL BE 1%.
- 21. ROUGH GRADING TOLERANCES SHALL BE  $\pm$  0.1 FT FOR BUILDING PADS AND STREETS AND  $\pm$  0.2' FOR ALL OTHER GRADING PROVIDED THE GRADES MEET THE INTENT OF THIS GRADING PLAN.
- 22. UNDER FEDERAL LAW, THE OPERATOR(S) OF CONSTRUCTION SITES WHERE 1 OR MORE ACRES ARE DISTURBED MUST SUBMIT A NOTICE OF INTENT (N.O.I.) TO OBTAIN COVERAGE UNDER AN NPDES STORM WATER CONSTRUCTION GENERAL PERMIT.
- 23. CAUTION: THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH SHALL REMAIN THE RESPONSIBILITY OF THE CONTRACTOR. ALL EXCAVATION, TRENCHING AND SHORING ACTIVITIES MUST BE CARRIED-OUT IN ACCORDANCE WITH OSHA 29 CFR 1926, SUBPART P-EXCAVATIONS.

(MATCH)

OUTLET TO ALLEY DETAIL

OFFICE BLDG.

SECTION, SHEET C107

→ INV 11.30

**BOTTOM ● 6.50** 

OFFICE BLDG. 2

The state of the s

2'-0" CONCRETE RUNDOWN PER

. Install 24" hancor drain basin with 18"

GRATE: TG11.00: INV IN 9.00 (N&S);

### CONSTRUCTION NOTES:

- 1. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL SYSTEM 260-1990 (ALBUQUERQUE AREA), 1-800-321-ALERT(2537) (STATEWIDE), FOR
- LOCATION OF EXISTING UTILITIES. 2. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL POTENTIAL OBSTRUCTIONS. SHOULD A CONFLICT EXIST. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL INTERPRETATIONS IT MAKES WITHOUT FIRST CONTACTING THE ENGINEER AS REQUIRED ABOVE.
- 3. ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.
- 4. ALL CONSTRUCTION WITHIN PUBLIC RIGHT-OF-WAY SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE CITY OF ALBUQUERQUE STANDARDS AND PROCEDURES.
- 5. IF ANY UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES ARE SHOWN ON THESE DRAWINGS, THEY ARE SHOWN IN AN APPROXIMATE MANNER ONLY, AND SUCH LINES MAY EXIST WHERE NONE ARE SHOWN. IF ANY SUCH EXISTING LINES ARE SHOWN, THE LOCATION IS BASED UPON INFORMATION PROVIDED BY THE OWNER OF SAID UTILITY, AND THE INFORMATION MAY BE INCOMPLETE, OR MAY BE OBSOLETE BY THE TIME CONSTRUCTION COMMENCES. THE ENGINEER HAS CONDUCTED ONLY PRELIMINARY INVESTIGATION OF THE LOCATION, DEPTH, SIZE, OR TYPE OF EXISTING UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES. THIS INVESTIGATION IS NOT CONCLUSIVE. AND MAY NOT BE COMPLETE. THEREFORE. MAKES NO REPRESENTATION PERTAINING THERETO, AND ASSUMES NO RESPONSIBILITY OR LIABILITY THEREFOR. THE CONTRACTOR SHALL INFORM ITSELF OF THE LOCATION OF ANY UTILITY LINE, PIPELINE, OR UNDERGROUND UTILITY LINE IN OR NEAR THE AREA OF THE WORK IN ADVANCE OF AND DURING EXCAVATION WORK. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGE CAUSED BY ITS FAILURE TO LOCATE, IDENTIFY AND PRESERVE ANY AND ALL EXISTING UTILITIES. PIPELINES. AND UNDERGROUND UTILITY LINES. IN PLANNING AND CONDUCTING EXCAVATION, THE CONTRACTOR SHALL COMPLY WITH STATE STATUTES, MUNICIPAL AND LOCAL ORDINANCES, RULES AND REGULATIONS, IF ANY, PERTAINING TO THE LOCATION OF THESE LINES AND FACILITIES.
- 6. THE DESIGN OF PLANTERS AND LANDSCAPED AREAS IS NOT PART OF THIS PLAN. ALL PLANTERS AND LANDSCAPED AREAS ADJACENT TO THE BUILDING(S) SHALL BE PROVIDED WITH POSITIVE DRAINAGE TO AVOID ANY PONDING ADJACENT TO THE STRUCTURE. FOR CONSTRUCTION DETAILS, REFER TO LANDSCAPING PLAN.
- 7. AN EXCAVATION/CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY RIGHT-OF-WAY. AN APPROVED COPY OF THESE PLANS MUST BE SUBMITTED AT THE TIME OF APPLICATION FOR THIS PERMIT.
- 8. BACKFILL COMPACTION SHALL BE ACCORDING TO ARTERIAL STREET USE.
- 9. MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED.

### EROSION CONTROL MEASURES:

- 1. THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES FROM THE SITE INTO PUBLIC RIGHT-OF-WAY OR ONTO PRIVATE PROPERTY.
- 2. THE CONTRACTOR SHALL PROMPTLY CLEAN UP ANY MATERIAL EXCAVATED WITHIN THE PUBLIC RIGHT-OF-WAY SO THAT THE EXCAVATED MATERIAL IS NOT SUSCEPTIBLE TO BEING WASHED DOWN
- THE STREET. 3. WHEN APPLICABLE, CONTRACTOR SHALL SECURE "TOPSOIL DISTURBANCE PERMIT" FROM THE CITY AND/OR FILE A NOTICE OF INTENT (N.O.I.) WITH THE EPA PRIOR TO BEGINNING CONSTRUCTION.

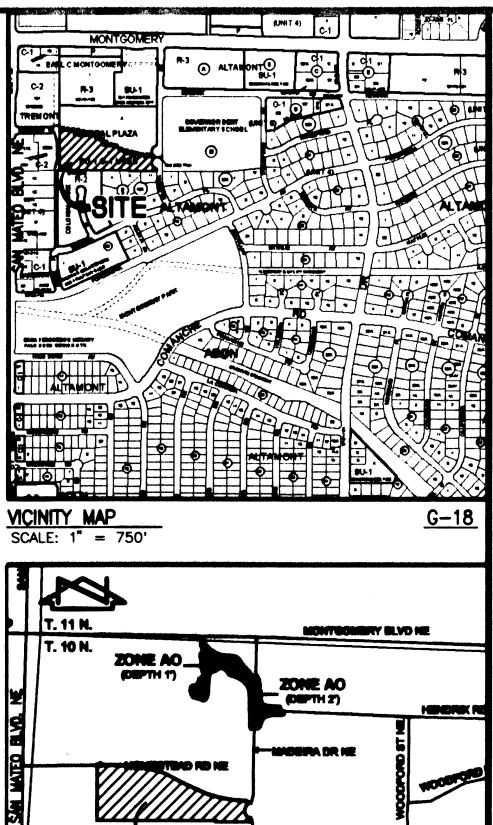
APPROVALS	NAME	DATE
HYDROLOGY		
SIDEWALK INSPECTOR		
STORM DRAIN MAINTENANCE		

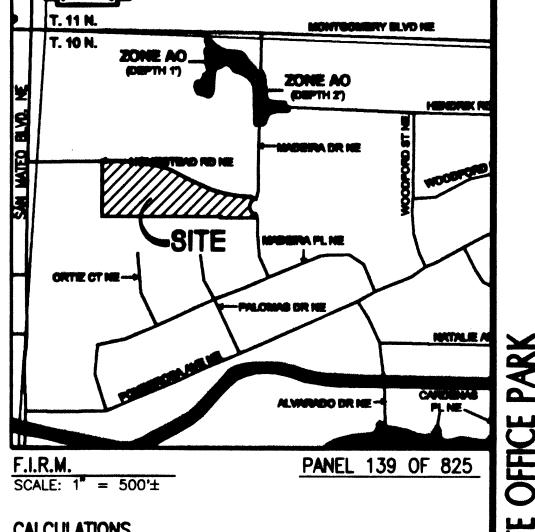
- 6" HANCOR DRAINTECH ATRIUM

GRATE (GREEN). DAYLIGHT AT

" PERFORATED HDPE

DIRECT PIPED ROOF DRAIN SECTION





# CALCULATIONS

# SITE CHARACTERISTICS

- 1. PRECIPITATION ZONE = 32.  $P_{8,100} = P_{380} = 2.60$
- 3. TOTAL PROJECT AREA (At) = 162,002 SF / 3.72 AC
- 4. EXISTING LAND TREATMENT A. BASIN A

TREATMENT

- TREATMENT AREA (SF/AC) % 162,002 / 3.72 100 5. DEVELOPED LAND TREATMENT A. BASIN A

AREA (SF/AC) 20,903 / 0.48 20,903 / 0.48 13 120,196 / 2.76 74 **EXISTING CONDITION** 

### A. BASIN A

1. VOLUME Ew = (EAA+EBA0+EcAc+EDA0)/AT

Ew = (1.29\*3.72)/3.72 = 1.29 IN

 $V_{100} = (E_W/12)A_T = (1.29/12)3.72 = 0.3998 AC-FT = 11.420 CF$ 

2. PEAK DISCHARGE

QP = QPA AA + QPBAB + QPCAC + QPDAD QP = Q160 = (3.45 + 3.72) = 12.8 CFS

### DEVELOPED CONDITION

A. BASIN A 1. VOLUME

Ew = (EAAA+EBAB+EcAc+EDAD)/AT

Ew = ((0.92\*0.48)+(1.29\*0.48)+(2.36\*2.73))/3.72 = 2.04 IN $V_{100} = (Ew/12)AT = (2.04/12)3.72 = 0.6310 AC-FT 15.850 CF$ 

2. PEAK DISCHARGE

QP = QPA AA + QPBAB + QPCAC + QPDAD

QP = Q100 = ((2.60 + 0.48) + (3.45 + 0.48) + (5.02 + 2.76)) = 16.8 CFS

B. SUB-BASIN A-1 (DRAINS TO ALLEY) AREA = 18.730 SF = 11.5% OF BASIN A $V_{100} = 0.115(V_{100},A) = 0.115(15,850) = 1825 \text{ CF}$ 

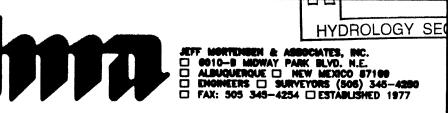
### $Q_{100} = 0.115(Q_{100},A) = 0.115(16.8) = 1.9 CFS$ COMPARISON

A. NORTH FLOW BASIN

1. VOLUME

 $V_{100} = 15,850-11,420 = 4,430 \text{ CF} (INCREASE)$ 2. PEAK DISCHARGE

OCT 9 5 200



SHEET NUMBER

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CALCULATIONS

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ARCHITECT

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OF

### ENGINEER'S DRAINAGE CERTIFICATION

I, J. GRAEME MEANS, NMPE 13676, OF THE FIRM HIGH MESA CONSULTING GROUP., HEREBY CERTIFY THAT THIS PROJECT HAS BEEN GRADED AND DRAINED IN SUBSTANTIAL COMPLIANCE WITH AND IN ACCORDANCE WITH THE DESIGN INTENT OF THE APPROVED PLAN DATED 10/24/2006. THE RECORD INFORMATION EDITED ONTO THE ORIGINAL DESIGN DOCUMENT WAS OBTAINED 07/13/2007 UNDER THE DIRECT SUPERVISION OF CHARLES G. CALA, JR., NMPS 11184, ALSO OF THE FIRM HIGH MESA CONSULTING GROUP. I FURTHER CERTIFY THAT I HAVE PERSONALLY VISITED THE PROJECT SITE AUGUST 27, 2007 AND DETERMINED BY VISUAL INSPECTION THAT THE DATA PROVIDED APPEARS TO BE REPRESENTATIVE OF ACTUAL SITE CONDITIONS AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. THIS CERTIFICATION IS SUBMITTED AS A RECORD DRAWING.

THE ORIGINAL SURVEY DATA INDICATED A POTENTIAL DRAINAGE BACKUP (ADVERSE SLOPE) AROUND THE NORTHEAST CORNER OF BUILDING 4. THIS AREA WAS SUBSEQUENTLY REGRADED BY THE CONTRACTOR. BASED ON MY VISUAL INSPECTION AND DATA PROVIDED BY THE CONTRACTOR, THE ADVERSE CONDITION WAS CORRECTED AND THE AREA SHOULD DRAIN IN ACCORDANCE WITH THE INTENT OF THE APPROVED PLAN. ALTHOUGH THE FINISHED FLOWLINE GRADE IS LESS THAN THE DESIRED 1%, IT IS BELOW FINISHED FLOOR ELEVATION AND THERE IS A RELATIVELY SMALL LANDSCAPED CONTRIBUTING AREA. NO ROOF DRAINS DISCHARGE TO THIS AREA.

THE RECORD INFORMATION PRESENTED HEREIN IS NOT NECESSARILY COMPLETE AND INTENDED ONLY TO VERIFY SUBSTANTIAL COMPLIANCE OF THE GRADING AND DRAINAGE ASPECTS OF THIS PROJECT AND DOES NOT ADDRESS COMPLIANCE WITH A.D.A. GUIDELINES. THOSE RELYING ON THIS RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE USING IT FOR ANY OTHER PURPOSE.



### ENGINEER'S TRAFFIC CERTIFICATION

I, J. GRAEME MEANS, NMPE 13676, OF THE FIRM HIGH MESA CONSULTING GROUP., HEREBY CERTIFY THAT THIS PROJECT HAS BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH AND IN ACCORDANCE WITH THE DESIGN INTENT OF THE DRB APPROVED SITE PLAN AS AMENDED 08/24/2007. THE RECORD INFORMATION EDITED ONTO THE ORIGINAL CONSTRUCTION DOCUMENT DATED 10/24/2006 WAS OBTAINED 07/13/2007 UNDER THE DIRECT SUPERVISION OF CHARLES G. CALA, JR., NMPS 11184, ALSO OF THE FIRM HIGH MESA CONSULTING GROUP. I FURTHER CERTIFY THAT I HAVE PERSONALLY VISITED THE PROJECT SITE AUGUST 27, 2007 AND DETERMINED BY VISUAL INSPECTION THAT THE DATA PROVIDED APPEARS TO BE REPRESENTATIVE OF ACTUAL SITE CONDITIONS AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. THIS CERTIFICATION IS SUBMITTED AS A RECORD DRAWING.

THE RECORD INFORMATION PRESENTED HEREIN IS NOT NECESSARILY COMPLETE AND INTENDED ONLY TO VERIFY SUBSTANTIAL COMPLIANCE OF THE PAVING ASPECTS OF THIS PROJECT AND DOES NOT ADDRESS COMPLIANCE WITH A.D.A. GUIDELINES. THOSE RELYING ON THIS RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE USING IT FOR ANY OTHER PURPOSE.

J. GRAEME MEANS, NMPE 13676

8 30 200



# SCALE: 1" = 750'±

LEGAL DESCRIPTION

TRACT A, DEL NORTE OFFICE PARK

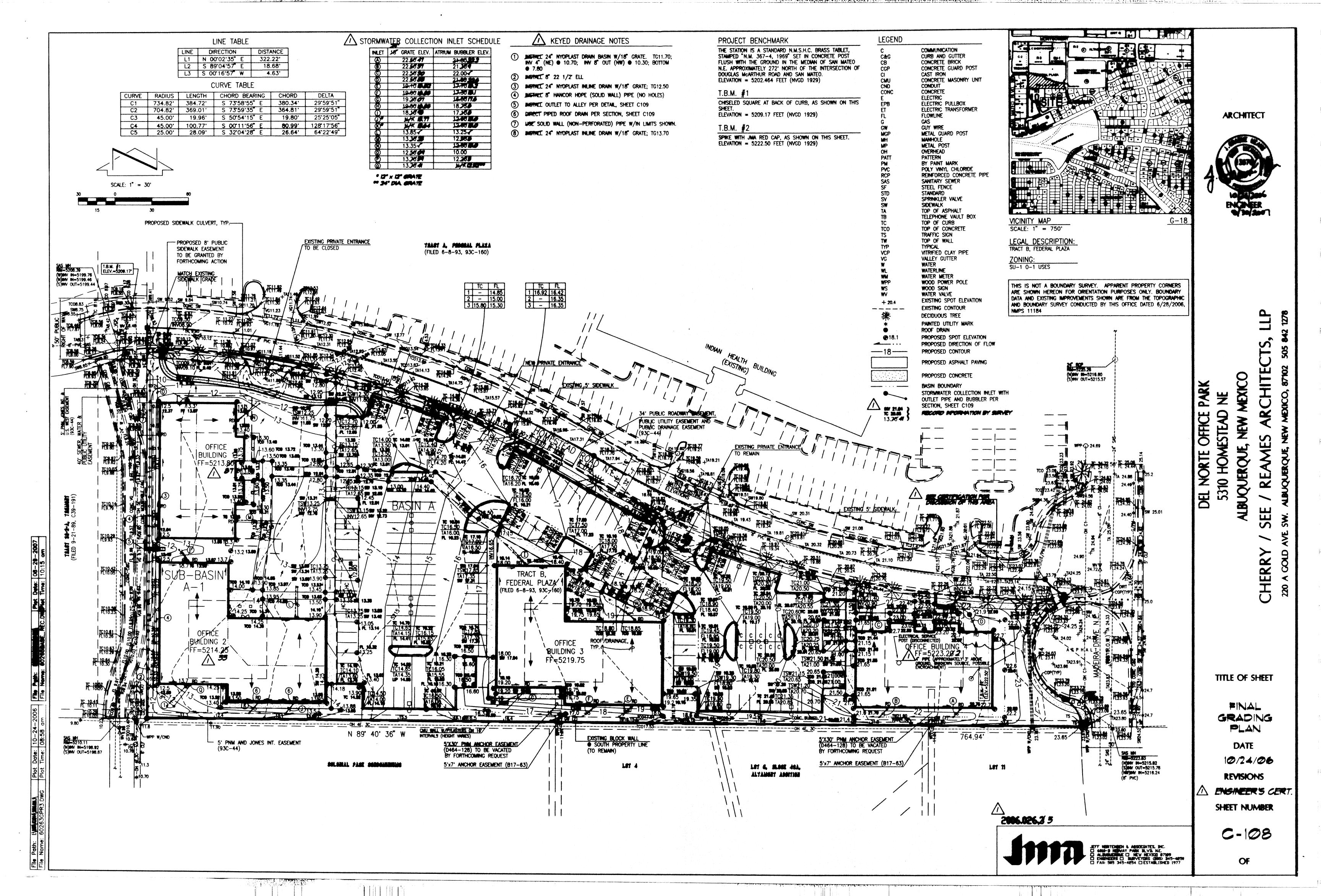
# HYDROLOGY FILE G18/D4

MESA Consulting Group

PHONE: 506.345.4280 • FAX: 506.346.4264 • www.highmesacg.com

ENGINEER'S CERTIFICATION DEL NORTE OFFICE PARK

		ND.	DATE	37	REVISIONS	JOB NO.	2007 027 5
DEZIGNED BA	_GM	$\Lambda$	06/01	G.M.	ENGINEER'S CERTIFICATIONS		2006.026.5
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BRAVN BY							08-2007
APPROVED BY	G.M.					SHEET	OF .
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### ENGINEER'S DRAINAGE CERTIFICATION

I, J. GRAEME MEANS, NMPE 13676, OF THE FIRM HIGH MESA CONSULTING GROUP., HEREBY CERTIFY THAT THIS PROJECT HAS BEEN GRADED AND DRAINED IN SUBSTANTIAL COMPLIANCE WITH AND IN ACCORDANCE WITH THE DESIGN INTENT OF THE APPROVED PLAN DATED 10/24/2006. THE RECORD INFORMATION EDITED ONTO THE ORIGINAL DESIGN DOCUMENT WAS OBTAINED 07/13/2007 UNDER THE DIRECT SUPERVISION OF CHARLES G. CALA, JR., NMPS 11184, ALSO OF THE FIRM HIGH MESA CONSULTING GROUP. I FURTHER CERTIFY THAT I HAVE PERSONALLY VISITED THE PROJECT SITE AUGUST 27, 2007 AND DETERMINED BY VISUAL INSPECTION THAT THE DATA PROVIDED APPEARS TO BE REPRESENTATIVE OF ACTUAL SITE CONDITIONS AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. THIS CERTIFICATION IS SUBMITTED AS A RECORD DRAWING.

THE ORIGINAL SURVEY DATA INDICATED A POTENTIAL DRAINAGE BACKUP (ADVERSE SLOPE) AROUND THE NORTHEAST CORNER OF BUILDING 4. THIS AREA WAS SUBSEQUENTLY REGRADED BY THE CONTRACTOR. BASED ON MY VISUAL INSPECTION AND DATA PROVIDED BY THE CONTRACTOR, THE ADVERSE CONDITION WAS CORRECTED AND THE AREA SHOULD DRAIN IN ACCORDANCE WITH THE INTENT OF THE APPROVED PLAN. ALTHOUGH THE FINISHED FLOWLINE GRADE IS LESS THAN THE DESIRED 1%, IT IS BELOW FINISHED FLOOR ELEVATION AND THERE IS A RELATIVELY SMALL LANDSCAPED CONTRIBUTING AREA. NO ROOF DRAINS DISCHARGE TO THIS AREA.

THE RECORD INFORMATION PRESENTED HEREIN IS NOT NECESSARILY COMPLETE AND INTENDED ONLY TO VERIFY SUBSTANTIAL COMPLIANCE OF THE GRADING AND DRAINAGE ASPECTS OF THIS PROJECT AND DOES NOT ADDRESS COMPLIANCE WITH A.D.A. GUIDELINES. THOSE RELYING ON THIS RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE USING IT FOR ANY OTHER PURPOSE.





### ENGINEER'S TRAFFIC CERTIFICATION

I, J. GRAEME MEANS, NMPE 13676, OF THE FIRM HIGH MESA CONSULTING GROUP., HEREBY CERTIFY THAT THIS PROJECT HAS BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH AND IN ACCORDANCE WITH THE DESIGN INTENT OF THE DRB APPROVED SITE PLAN AS AMENDED 08/24/2007. THE RECORD INFORMATION EDITED ONTO THE ORIGINAL CONSTRUCTION DOCUMENT DATED 10/24/2008 WAS OBTAINED 07/13/2007 UNDER THE DIRECT SUPERVISION OF CHARLES G. CALA, JR., NMPS 11184, ALSO OF THE FIRM HIGH MESA CONSULTING GROUP. I FURTHER CERTIFY THAT I HAVE PERSONALLY VISITED THE PROJECT SITE AUGUST 27, 2007 AND DETERMINED BY VISUAL INSPECTION THAT THE DATA PROVIDED APPEARS TO BE REPRESENTATIVE OF ACTUAL SITE CONDITIONS AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. THIS CERTIFICATION IS SUBMITTED AS A RECORD DRAWING.

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# SCALE: $1'' = 750'\pm$ LEGAL DESCRIPTION

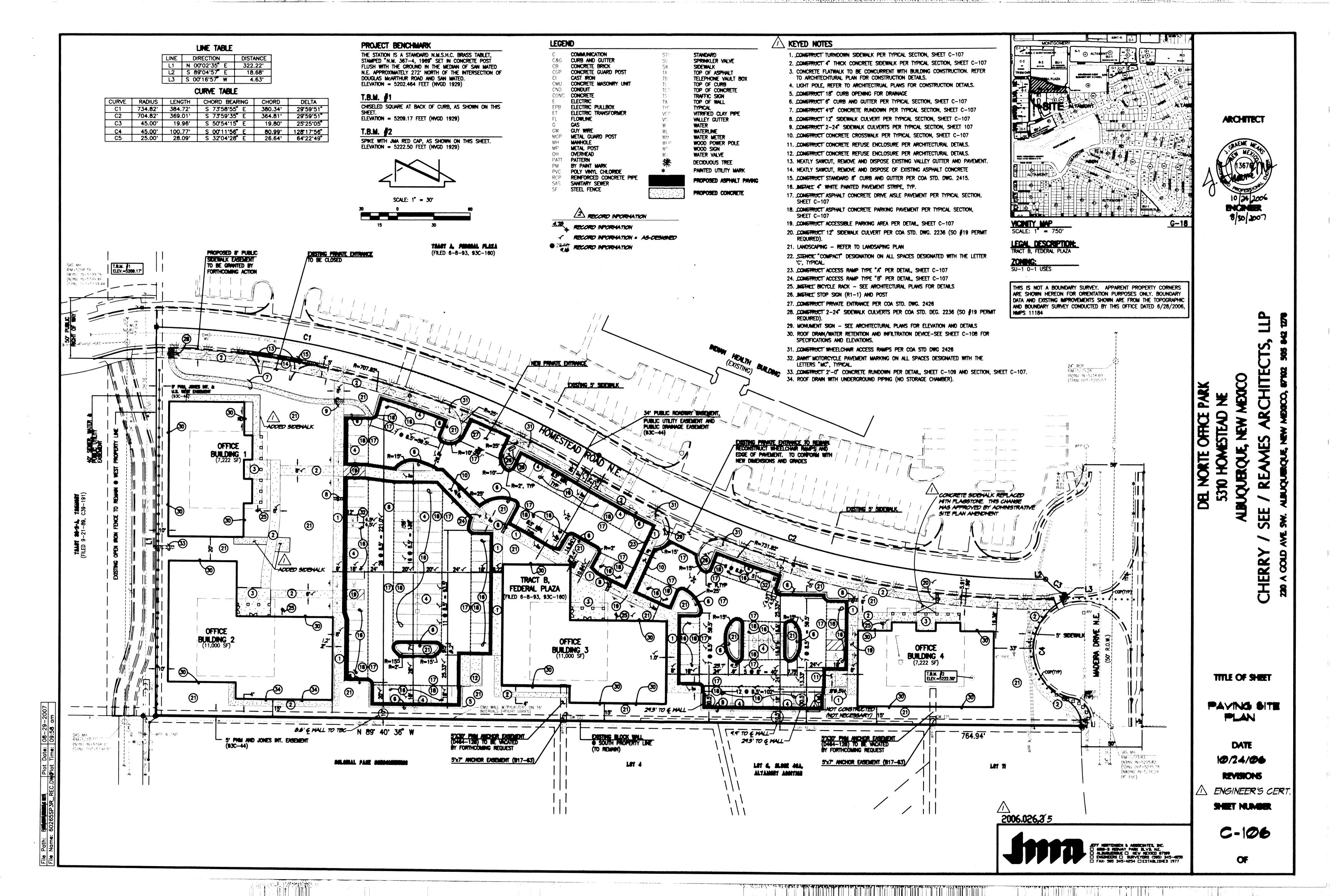
TRACT A, DEL NORTE OFFICE PARK

## HYDROLOGY FILE G18/D4

PHONE: 505.345.4290 • FAX: 506.345.4254 • www.highmesacg.com

CERTIFICATION DEL NORTE OFFICE PARK

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J. GRAENE MEANS, NMPE 13676

8/30/2007



SCALE: 1" = 750'±

LEGAL DESCRIPTION

TRACT A, DEL NORTE OFFICE PARK

# HYDROLOGY FILE G18/D4

MESA Consulting Group

4010-B MIDWAY PARK BLVD. NE . ALBUQUERQUE, NEW MEXICO 87109 PHONE: 505.346.4290 • FAX: 505.345.4254 • www.highmesacg.com

ENGINEER'S CERTIFICATION DEL NORTE OFFICE PARK

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